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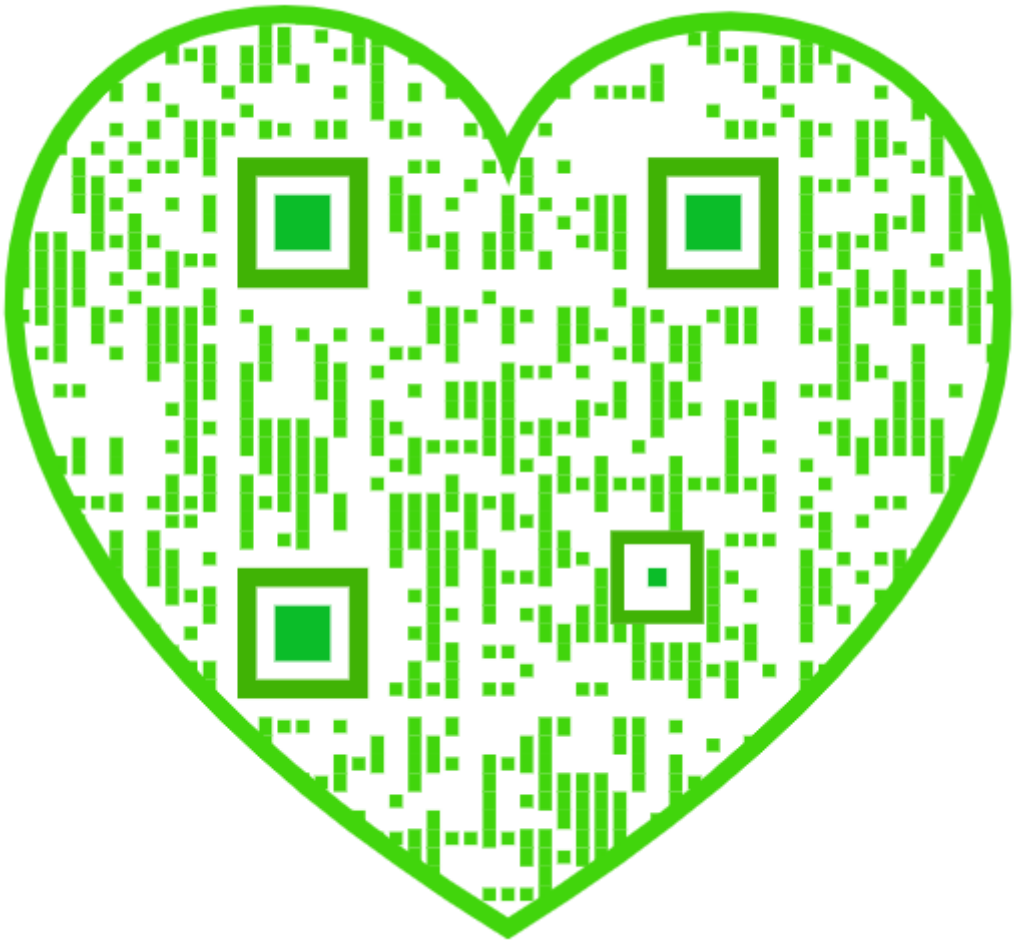
DEEP SEA FISHING GROUNDS

Fire Island to Barnegat

KNOWLSON & MULLER
PUBLISHERS
EAGLE BUILDING BROOKLYN N.



DEEP SEA
FISHING GROUNDS

Fire Island to Barnegat

WRECKS FISHING BANKS REEFS

BY
JULIUS W. MULLER and ARTHUR KNOWLSON

Charts drawn especially for this book by Julius W. Muller.

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EAGLE BUILDING BROOKLYN, N. Y.

PREFACE: It was the introduction of large, comfortable, swift and safe sea-going power-vessels that first made the off-shore grounds available to the large army of New York City's fishermen. Before that they were limited to a few steamboats which could carry only a tiny percentage of people as compared with the surprising numbers who now go out regularly.

¶ The only other party-boats were sloops and schooners and these could not often reach distant grounds. Even in attempting to go to places comparatively near shore, they often had uncomfortable adventures; and on the whole a trip in their days furnished more cruising (or drifting) than fishing.

¶ Until the power-boats came in, the off-shore grounds were known to comparatively few men. But the power-boats developed a little navy of excellent fishing-pilots. The result is that to-day the old grounds are better known than they ever have been, and many excellent new ones have been discovered.

¶ This book is the first and only publication to describe the fishing spots and fishing wrecks off shore. It represents more than a year of patient and careful work. The fishing captains of New York have given valuable and enthusiastic assistance, and all the facts presented in the book have been elaborately checked back.

¶ In addition, deep-sea experts, hydrographic authorities and ocean pilots have been consulted; and exceedingly valuable, and hitherto little known, facts have been thus gained and are here published for the first time.

¶ We call attention to the description and histories of the famous wrecks. The story of many of these was practically unknown to the present generation, and it seemed impossible for a long time to get any facts about them, as there were practically no records. It was only after many months of laborious investigation that the editors succeeded in gathering the data here presented. In order to get some of the details it was necessary to go through old files and shipping documents for years back.

¶ The distances given here are nautical miles. (A nautical mile is about 1⅛ land miles.) The compass bearings are magnetic. The depths given are mean low water.

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Where The Fish Feed

¶ There is no city in the world that has as many citizens who fish regularly for sport in the open sea as New York. Few large cities have such good fishing grounds so near to them. From its coasts, to a line drawn through the ocean from Fire Island to Barnegat, there is a truly extraordinary range of fishing places.

¶ Although they have been fished for more than a century, they are apparently as good as ever. They cannot be fished out, because they are natural feeding grounds to which the fish come in hordes from the deep ocean every season.

¶ The fish may not always be in a particular spot, because the schools move around for reasons which even the best fisherman has not yet studied out. It happens, also, that they may be on a ground in great numbers, but refuse to bite for a time. But the fishermen who go out regularly, are pretty sure to make good catches in the aggregate.

¶ Although the various grounds and wrecks have been known so long, there never has been a successful effort to describe them authoritatively until now.

¶ In the following pages the grounds are described beginning with the Long Island grounds from Fire Island westward along Long Beach, then the Rockaway and Coney Island grounds, the New Jersey grounds, and finally the off-shore banks furthest out. After these come the wrecks. Their stories are told here for the first time.

LONG BEACH GROUNDS. The fishing places known under this general name lie fairly close to the Long Island shore, in an area of sea between Rockaway Inlet and Fire Island Inlet, a stretch 28½ miles long. Many small inlets open into the Atlantic Ocean between these two big inlets, the most important being Jones Inlet. The waters inside are part of Great South Bay but have local names.

¶ The area behind Long Beach is officially designated Hempstead Bay, but as it is less a bay than a collection of intricate channels, the various parts of it are better known by specific names such as Hewletts, Wreck Lead, Queenswater, Inner Beach, Middle Bay, East Bay, etc. East of this section, and lying behind Jones Beach, the bay is called South Oyster Bay. (It must not be confounded with Oyster Bay on the north shore.) It has more open water than Hempstead Bay, and widens out at its eastern end into Great South Bay proper.

¶ The sea fishing grounds lie from 2½ miles to 4 miles off shore, most of them being grouped in the area from Long Beach on the west to Jones Beach on the east. They form an extraordinary range of fishing spots, full of mussel beds and other feeding places that attract fish in great schools. The various places are much alike in character. The water has fairly uniform depths, from 40 to 55 feet deep, with comparatively few parts that are very much shoaler or deeper.

¶ Three large red whistling buoys are anchored on the grounds. They lie about 3½ miles off the beaches, and about 3¼ miles apart, in a line almost due east and west.

BUOY No. 6 officially designated as East Rockaway Whistling Buoy, is moored in 53 feet mean low water, and is the farthest westward of the three. It is the first of the buoys to be sighted by fishing boats bound from New York Harbor and Sheepshead Bay to the Long Beach grounds, and is picked up soon after passing Far Rockaway.

BUOY No. 4 is moored due south of about the central point of the Long Beach shore. It is in 52 feet of water, mean low water measurement, and is known officially as the Long Beach Whistling Buoy. It has a great number of favorite fishing spots grouped around it, near and distant.

BUOY No. 2. This buoy is the farthest eastward of the three. It lies 3¼ miles due south of Jones Inlet in 54 feet of water. These buoys serve as guides to the various inlets on the Long Island shore, but their chief purpose is to warn ocean and coasting shipping bound toward New York Harbor against approaching the Long Island coast too closely after passing Fire Island Lightship.

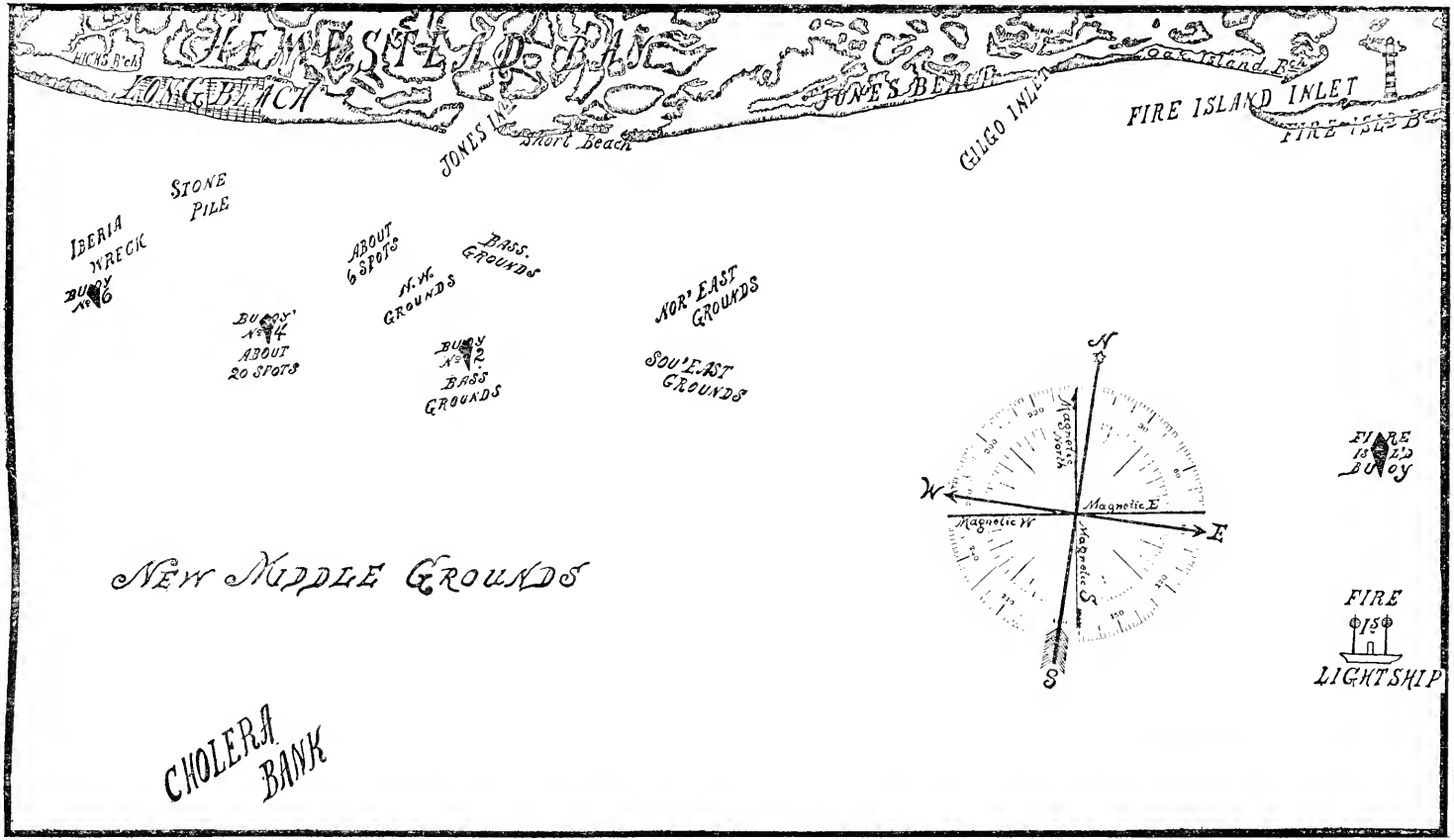
LONG BEACH BASS GROUNDS. These are not by any means the only sea bass grounds of this region, but are so designated here for lack of a more distinctive name. The particular grounds to which this title refers are grouped around buoy No. 4. The best of them lie within a triangle that would be formed by running a line 1 mile long due south-west from the buoy and another line the same length due south-east. Within this area there are about twenty choice "spots." On all of them in the sea bass season large fish are exceedingly plentiful. The large sea porgies also love these grounds and are caught sometimes in surprising numbers and of quite remarkable weight.

¶ About 2 miles due north-east from the buoy are 5 or 6 excellent spots, where the bottom is full of mussels clinging to pebbles and rocks so as to make large mussel-patches. Sea bass and porgies of fine size often are so thick over these clumps that they are caught as quickly as the fishermen can bring them in and re-bait their lines.

SOU'-EAST & NOR'-EAST GROUNDS. The Sou'-East ground is 3 miles east of buoy No. 2, and is celebrated for hump-backed sea bass. It is somewhat deeper than many of the other grounds, having depths of 58 feet. About 1 mile north-east is Nor'-East ground, considered equally good at times.

¶ About 1 mile north from buoy No. 2 begins a series of hummocks that extends for 1 mile further north, making an irregular bottom, whose depths vary greatly owing to the very varying sizes of the hummocks, some being large and some limited in height. Therefore the depths range from 30 to 51 feet according to the hummocks on which anchor is cast. As a rule, according to the experience of pilots, the sea bass do not run large there, but they make up for it by being very plentiful at most times. These grounds are subject to sanding up.

¶ For about 2,000 feet in all directions around buoys No. 2 and 4 there are great patches of mussels where sea bass and porgies feed.



LONG BEACH GROUNDS.

NOR'-WEST GROUNDS. One and a half miles north-west from buoy No. 2 is another spot famous for large sea bass and porgies. Its bottom is hard sand and broken shells with mussel beds, and the depths range from 42 to 50 feet at mean low tide.

¶ When going to these grounds, the boats often encounter great schools of very large weakfish and bluefish, which are taken on the surface by trolling. Fluke find the bottom most attractive and at most times very large ones can be taken over the whole area. In 1913 particularly good catches of these fish were made on the rich hummock bottom about ¾ miles off shore between the Long Beach Hotel and Jones Inlet. Blackfish are found throughout the Long Beach grounds wherever there is a wreck or such a large collection of rock as

LONG BEACH STONE PILE. This is not artificial like the famous Stone Pile of Manhattan Beach, but is a natural rock deposit on a broken bottom of fair extent, well covered with barnacles, coral, sponges, small crustaceans and particularly mussels. It is closer in-shore than other grounds, being only 1¼ miles off the shore. It lies 2½ miles north-east from whistling buoy No. 6.

OLD SOU' EAST GROUNDS lie 1 mile east of the Stone Pile. There are about 48 feet of water with a fair gravel and mussel bottom. Good catches have been made here, but they have not been fished much in recent years.

¶ Between buoy No. 4 and the Angler Banks is a newly found ground that has been named the New Middle Ground. It is further described in connection with the Cholera and Angler Banks in the pages that follow, as it belongs properly to their group of fishing places.

¶ There is not much tidal current on the Long Beach grounds except near the inlets where the current, particularly at flood tide, often runs 1½ to 2 miles an hour. The flood current is more noticeable generally than the ebb over the entire grounds. These tides do not set directly on or off the shore, as a rule. Ebb currents have a tendency to flow south-eastward, while the flood tides incline to swing north-westward.

¶ Great catches of large blackfish are made at the various wrecks that lie in these waters, some close in shore, and some, like the Iberia wreck, out at sea. The wrecks are described fully elsewhere in this book.

FIRE ISLAND LIGHT-SHIP lies 18 miles south-east from buoy No. 2. The mammoth red Fire Island Whistling Buoy is moored between the light-ship and Fire Island Light, a tower on the Fire Island Beach, easily recognized because it is painted with black and white bands.

CONEY ISLAND MUSSEL BEDS. These beds lie as close as ¼ mile to the shore off the Steeplechase and other piers, and they widen out and also sheer seaward steadily toward their eastern end. In length they cover all the area from Steeplechase Pier to the Rockaway Shoals Gas Buoy. They make a broad and roomy fishing ground, although not all parts of it are equally good. On the best spots it is not difficult, usually, to make good catches of fluke, sea bass, porgies and blackfish. The season is long as a rule, lasting from May to October in normal years. The grounds are usually full of ling. A spot not strictly forming part of the mussel beds is the

MANHATTAN BEACH STONE PILE. It is the debris of an old stone breakwater that extended from the Manhattan Beach Hotel years ago before the sea had made in, when Manhattan Beach ran much farther out than it does now. The stones lie in a broken mass about 1,200 feet long and only 20 to 30 feet wide. The wreckage lies east and west, from a point west of the old Manhattan Beach Hotel to the Oriental Hotel. It runs almost parallel with the bulkheads of the hotel, and is only about 350 feet off shore. It is easy to find, as it is necessary merely to drag a line and sinker outward from the bulkhead. The place is shoal, having only 14 feet at high tide over the deepest parts, while some of the piles of stone and old timbers have as little as 10 feet over them. Despite this small depth of water, the blackfish taken here sometimes run as large as far off-shore.

CONEY ISLAND BELL BUOY is another spot that sometimes furnishes excellent blackfish, and almost always offers fair fluke fishing. This is not the large gas and bell buoy that marks Coney Island Point, but the old West End Pier Bell Buoy between Steeplechase Pier and Norton's Point. It is red and unlighted, and is anchored off shore in 21 feet. Originally it marked the sunken end of a long wooden pier which ran out here many years ago and was a most popular fishing place.

ROCKAWAY SHOALS GAS BUOY. This is on a great ling ground which stretches for a considerable distance eastward and southward. There are two gas buoys off Rockaway Inlet, one marking Rockaway Point and the other marking the shoals. The latter is referred to here. It is a red buoy, No. 4, and is named officially Rockaway Shoal South-West Point Gas Buoy. It shows an occulting light ten feet above the sea, exhibiting a 50 candle-power light-beam for 5 seconds followed by 5 seconds of darkness. The depth of water is 30 feet. From this point eastward to the Rockaway Bell Buoy the ling fishing generally is very reliable.

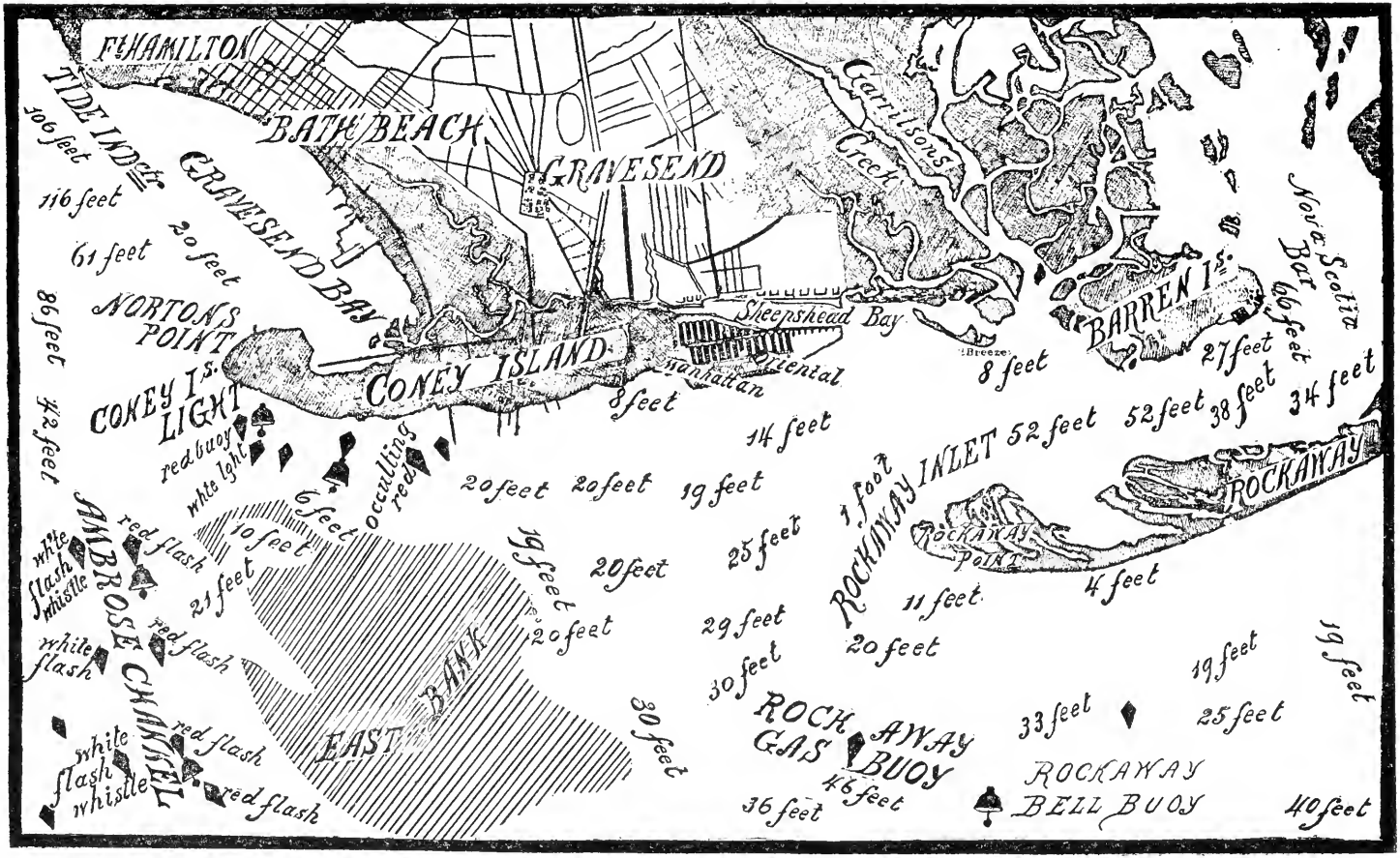
ROCKAWAY BELL BUOY is anchored in 42 feet of water, 1¼ miles south-east of the gas buoy. The bottom in quite an area around this stretch is partly hard gray sand, partly black sand with yellow specks and many broken shells, and partly broken shells mixed with ashes which are the remnants of dumpings. Mussels occur plentifully throughout the area. The depths average 30 feet, with a number of spots sinking to 35.

¶ In shore of this locality lies the famous Black Warrior wreck, which is described in the article on wrecks.

DILBERRY GROUNDS. This name was applied to the ground about the Black Warrior Wreck when Rockaway Inlet was much further east. They were much used in bad weather by the professional fishing smacks, because they had a certain amount of shelter. Although they were so close in shore, the cod-fish were large and almost as plentiful as on the far off-shore grounds. They maintained their excellence even after the Inlet had been shifted.

¶ West-south-west 3 miles from Rockaway Shoals Gas Buoy is the beginning of the

ROMER SHOALS one of the best-known places of New York Harbor. It lies between Ambrose and Swash Channels, and extends 3½ miles in a north-westerly and south-easterly direction. Near the middle of the shoal, on the Swash Channel side, stands Romer Shoal Light-house. The black Ambrose Channel buoys mark its northerly side, and red Swash Channel buoys indicate its southerly limit. The depths vary extremely on the shoal, there being places with only 3 feet



IN-SHORE GROUNDS.

of water at mean low tide, while others have 18. The shoalest spot is about ¾ mile south-east from the light. Fluke are plentiful as a rule over the whole extent of the East and West Romer. In fact, they are to be found from there all the way to the

SANDY HOOK GROUNDS. These grounds, so far as fluke fishing is concerned, extend from the point of Sandy Hook toward Gedney Channel 4 miles east, and all along the seaward edge of Sandy Hook in front of the Government property, as well as around the Hook into the Lower Bay and Sandy Hook Bay. The fluke, however, are wandering fish whose habit is to follow the movements of the smaller creatures on which they feed. Therefore they may be found close in shore one day, and the next day, or even the next tide, they may be well out. Inside of the Lower Bay the fluke grounds extend well beyond

FLYNNS KNOLL which is a shoal about ¾ mile long northwest of Sandy Hook Beacon (on the point of the Hook.) The Main Ship Channel flows between it and the Hook. It has from 10½ to 17 feet of water over it, and its bottom is hard sand. At its western end, a spur about ½ mile long runs west by south to a red gas and bell buoy 12 feet above water, which is the Southwest Spit Gas and Bell Buoy No. 12. It lies in 30 feet, and marks the westerly end of the spur, which is called

SOUTHWEST SPIT. Besides being a good fluke ground, it is noted for bluefish. These generally are not the very large fish taken farther out, but range up to two pounds with occasionally schools running up to 6 and more. The smaller fish, however, are more numerous.

FALSE HOOK. This is a curious, very large shoal just east of Sandy Hook, running about parallel with the beach and being somewhat of the same shape as the Hook. It extends from a point below the Spermaceti Cove Life Saving Station to a point north where it almost touches the Hook, with only a very narrow channel, 21 feet deep, between. The water averages 21 feet deep. There are, however, four smaller shoals on this large shoal. The most northern makes out for ⅝ mile from North Hook Beacon, has 11 to 17 feet, and is marked by a black bell buoy. Farther south is False Hook Shoal, east by south from the point of the Hook.

THE OIL SPOT. This is the next shoal south. It is 7/8 mile south by east from False Hook Shoal, 800 yards east from the beach, and its widest part extends nearly 1,500 yards seaward. The greater part of it is only 800 yards long and about as wide. It has from 10 to 19 feet, but near the middle has a spot with only 10. Its western edge is marked by a red spar, (Oil Spot Buoy No. 4) in 18 feet.

OUTER MIDDLE GROUND. This is the most southerly of the shoals. It is 1,500 yards east by north from Spermaceti Cove Life Saving Station and consists of broken lumps with 18 to 21 feet over them.

THE CEDARS is a rather noted ground for ling inside these shoals. A favorite anchorage is inside of the Oil Spot Buoy on grounds that deepen from 18 to 30 feet. In a general way the fishing is good all the way along between the False Hook and Sandy Hook beach. November and December are considered the best months in this vicinity. The bottom is hard, consisting largely of coarse yellow sand with broken shells and some pebbles. There are a few sticky spots of small area. The various United States Government structures on the Hook are guides to this fishing area.

FALSE HOOK CHANNEL runs between the shoals and the Hook, sometimes swinging to within 200 yards of the beach. It has as much as 35 feet in it, with 19 feet as its shoalest, and can be used by large vessels whose pilot knows the course. It is buoyed, and leads into the ship channels.

HIGHLAND GROUNDS lie close in to the New Jersey shore below the southern end of the Highlands of Navesink. There are about fifteen more or less large patches of rock which attract sea bass from June to October and blackfish from summer to December. The blackfish do not remain on these grounds through the winter. This is partly because the water is only from 18 to 30 feet deep, whereas blackfish desire much deeper water for the cold months. Another reason is that cold weather brings enormous schools of sea-sculpins or hackleheads into these feeding grounds, and the spined invaders drive other fish out.

SEABRIGHT GROUNDS. This is the general name applied to more or less scattered groups of rock masses that lie south and east from Seabright, New Jersey, which is south of Navesink Highlands. They begin rather close in shore, and do not in any case lie very far out at sea. This makes them favorite fishing banks for the surfmen of New Jersey from Sandy Hook to Manasquan. Those nearest to the shore are the

SHREWSBURY ROCKS a broken, very irregular submarine reef of large and small rocks making out from the shore directly in front of the beach between Monmouth Life Saving Station and Galilee. They extend seaward east-north-east 1½ miles and are marked at the outer end by a black buoy, the Shrewsbury Rocks Bell Buoy, anchored in 36 feet. The depths along this reef are very irregular. The irregularity in soundings is caused by the many lumps and ledges of rock that thrust themselves up in isolated spots from the surrounding reef. Such lumps are splendid for sea bass and blackfish, and when these fish are plentiful, sea bass often can be taken along the whole ledge, from within 300 yards of the beach to the distance of 3 miles out.

THE RATTLESNAKE is one of the noted spots. It lies almost at the seaward end of the Shrewsbury Rocks proper, is full of lumps with about 54 feet of water and offers excellent feeding grounds. It is a very solid rock-mass and is named because of its shape, which is said to be like that of a rattle-snake coiled for striking.

ROCKY HILL. Leading out to sea from the end of the Shrewsbury Rock ledge, lie broken masses of rock, separated by sand gullies bare of stones. Beyond these gullies, the soundings suddenly strike a large rocky area in about 60 feet. This place, about ½ mile square, is Rocky Hill. Like the other spots, it is a good place for sea bass, and porgies sometimes appear there in large schools. Fluke can be found almost always.

THE ELBOW is another well-known rock deposit. It is about 1,500 feet north-north-west from the bell buoy and makes a decided shoal with less than 20 feet over it at low water. Its name was given to it by divers who described it as being shaped like a man's arm bent back to strike. It is a conglomeration of massive rock with coral clumps.

NEW JERSEY COAST GROUNDS.

DUCK GROUNDS. These are called "Middle Grounds" occasionally, but it is a mis-leading name because there are very many spots that bear this name. Thus there are "Middle Grounds" off Sandy Hook, near the Cholera Banks, off Long Beach, in Raritan Bay and in Jamaica Bay. The Duck Grounds lie ¾ miles north-east of the Shrewsbury Rock Bell Buoy. They have about 24 feet over their shoalest part and are a general fishing ground, being fairly reliable for all the various fish in their seasons. Sea bass, fluke and porgies are found there through the summer, and in the autumn and spring there is good blackfishing, with cod early and late in the season. The origin of the name, according to tradition, is that immense flocks of duck were seen there by the men who discovered the grounds.

NIGGER GROUND. A small spot about 1,000 feet north-east from Duck Grounds, and slightly less than a mile from the bell buoy. The water deepens here to 24 and 30 feet and the fishing conditions are the same as on Duck Grounds. Nobody knows why it was named, but the guess is that its discoverers were negroes.

THE KNOLL. This ground lies 1 mile south-east by east from the Nigger Ground. It was so named because it sticks up from the surrounding bottom like a pinnacle, having only 27 feet of water over it while all around it the depths are 42 and 48 feet. Sea bass, porgies and fluke frequent it in the summer, and black-fishing is good from October to the end of November, as a rule, and again early in spring.

STATEN ISLAND BANKS. South-east by south from The Knoll, and 1½ miles distant, lie the Staten Island Banks. These grounds are 2½ miles off the nearest part of the New Jersey beach, and have 50 to 60 feet of water on them. Sea bass often appear here in great quantities and bite voraciously. They are said to run larger than farther in-shore. Sea porgies are found often in big schools and of excellent size. The Staten Island Banks offer blackfish and cod about the same as the other places of the Seabright group. The name is supposed to have been given them because the first fishermen to try the spot were men from Staten Island. Some fishing pilots apply the name Rattlesnake Bank to a part of these grounds.

LONG BRANCH GROUND. In front of Long Branch, N. J., about ¼ mile due east of the great million dollar pier, there begins a cluster or broken chain of rocks that extends east by south for 1½ miles. The depths range from 18 to 42 feet and there usually are large numbers of blackfish and sea bass feeding on the rocks. About 1,000 feet from the extreme end lies a sunken coal barge which was wrecked there a good many years ago, and it is now so completely shell-incrusted that it is a famous gathering place for wreck-haunting fish.

WEST END AND ELBERON GROUNDS. These are farther south, and begin closer in shore. They, also, are clusters of rock disposed irregularly. In some places the rocks lie within 150 feet of the beach. The general formation is that of large and small clumps of rocks with patches of hard sand between them. These rock clumps can be followed about 4 miles to sea. They extend east and then south-east by east, and in the 4 miles the depths fall from 6 feet to 60. Like the Long Branch rocks, they are excellent feeding grounds for sea bass and blackfish.

ENGLAND BANKS are in deep water at the far seaward end of the Elberon rock-chain. These grounds, also known as New England Banks, are famous for large sea bass. They show depths beyond 60 feet, and stretch some distance out. The early fishermen were so accustomed to catching fish nearer shore that when men first started to go out to these more distant grounds they used to say that they were "going to England to fish." The J. B. Schuyler is said to have been the first steamboat to fish this place.

¶ In a line between Seabright and the England Banks there used to be three famous spots — The Bench, The Bank and The Never-Fail. Few sea bass appear to have been caught on these in recent years. In fishing all this territory, the pilots must be expert enough to drop exactly on a rocky spot. Many of the good spots are quite small, so that only a power boat can find room over it, and even then it will swing off unless it lies very steadily. Other spots again have rocky areas large enough for a steamboat to swing all over them.

¶ The next grounds along the New Jersey coast are south of these and are off Asbury Park. The one nearest to that place is

LITTLE ROCK a small rock-spot, 3 miles south-east by south from Asbury Park pier, not more than 200 feet in an east and west direction, and only about 50 feet north and south. It has about 48 feet over it at low water, and is esteemed for seabass, porgies and fluke in summer, and cod and blackfish in autumn and spring.

¶ South by east 2 miles from this rock lies a steamer wreck which is much fished by boats running out from Asbury Park.

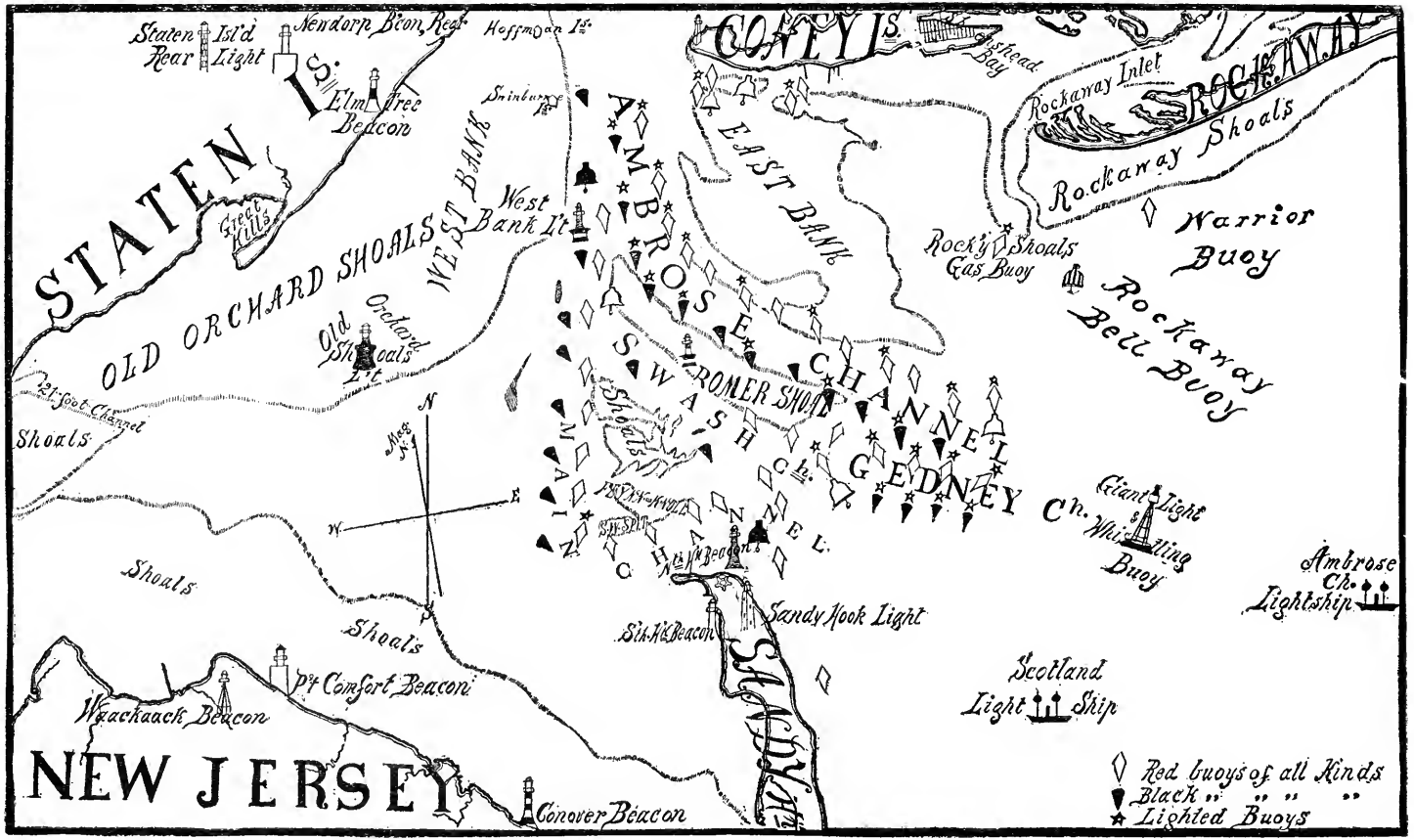
KLONDIKE BANKS known also as Shark River Grounds, are 3 miles south-east by south from this wreck, and bear 7½ miles south-east from Asbury Park and 6½ miles from nearest part of New Jersey beach. The good fishing spots are clusters of rocks and large stones matted together with mussels. The best places are clusters known as Big Rock, Flat Rock and Shark's Ledge. The water is deep, varying from 72 to 80 feet, and the sea bass and blackfish run large. From December to April there is good codfishing.

¶ The name was given to the grounds because they were discovered during the gold fever in the Klondike. Captain Henry Beebe, the discoverer, was captain in that year of the pilot boat E. B. Jordan, which lay off Ocean Grove for hire as a party boat. In the mornings she took fishermen to near-by sea fishing grounds, and in the afternoon she took sailing parties out. One morning the surf was too rough to permit the boat to take any people from the beach. Captain Beebe set easy sail on his vessel and let her drift slowly off shore. After they got quite a distance out, lines were put over without any particular expectation of catching anything. Almost at once big blackfish began to come aboard. They were of such unusual size and so very plentiful, that Beebe marked the spot.

¶ South-east from here, 1 mile, are several small spots that form a group on which excellent fishing is to be found at times.

AMBROSE CHANNEL LIGHT-SHIP GROUNDS. The light-ship lies in 78 feet of water, 6¼ miles south-east by south from Rockaway Bell Buoy and 7¾ miles east from Sandy Hook Light. The normal depths around the vessel are from 80 to 90 feet, but up to 1900 much dumping was done here by scows from New York City. This has formed many lumps and banks, some of them more than fifty feet higher than the normal bottom.

¶ On part of this ground, particularly to northward and west-



HARBOR ENTRANCE.

ward by north, much of the dumping consisted of refuse; and on these grounds the chief fishing is for ling, which are attracted by bottoms that other fish pass by. However, many parts have become covered again with marine deposits, and thus offer excellent feeding places for other fish besides ling. It may be said that the region all around the light ship and for a considerable distance is a good fishing ground. One of the famous ling grounds is

SEAGULL BANKS so named by Captain Foster because of the immense flocks of seagulls which hovered over the locality when he first fished it.

¶ Probably the favorite fishing spot is a ground full of large hummocks and lumps that begins 600 yards south-west from the light-ship and extends for about ½ mile. On the biggest of these lumps the depth of water is only 34 feet, and the other depths range from that to about 50. The reason this spot is so good is that the dumping here consisted mainly of rock and large bowlders that came from excavation work in New York City. Colonies of sea-worms, barnacles, mussels and other shell-fish naturally found this a happy home. Therefore almost all sorts of bottom-feeding fish frequent the place more or less. Cod are taken here as well as whiting and ling, and often there is fair fishing for sea bass and porgies, while blackfish and fluke are found almost always.

EVOLUTION GROUNDS are supposed by some to be the same as the Seagull Banks, but Captain Henry Beebe differentiates between them. He says that the J. S. Warden was the first boat to make a big haul of fish there. It was in 1906 when he took the Warden to the grounds for an experiment, believing that the old dumpings should by that time have "evoluted" into good fishing grounds. His hopes were more than realized. On a ground extending from the light-ship almost 3 miles south-east by south, and sloping slowly into from 90 to 108 feet, he took a mess of codfish that was phenomenal both for quantity and size. He describes the scene on the Warden, when huge cod lay piled all around the decks, and fishermen were dragging big fish two at a time through the gangways and other parts of the vessel. Few of the cod taken that day were under 20 pounds in weight, and many ran to 30 and 35 pounds. When the Warden was homeward bound, he suggested jokingly that the grounds were indeed Evolution Grounds.

CHOLERA BANKS. This unpleasant name dates back to the great cholera epidemic of 1832, when New York City suffered from the plague almost as some of the Asiatic cities do to-day. At that time the professional fishermen who supplied the Fulton Market did not trouble to run their smacks very far from the harbor limits. Sea bass were the fish mostly in demand then, and they were enormously plentiful even in the Lower Harbor, while it was rarely necessary to go outside of the range of Sandy Hook Light to catch them in smack-loads, and of great size. In the cholera year a number of smacks were casting about for a new fishing ground. Captain Harris of New London dropped anchor on a rocky ground and immediately began to catch seabass in such numbers that he hoisted a black disk or ball as a signal to the other vessels.

¶ Among these smacks was that owned by Captain Clinton Beebe. They were catching fish themselves and did not heed the signal until Captain Harris set a flag as an additional signal, whereupon they dropped down with the result that all the smacks that anchored there that day filled up in record time and with record fish. The day fortunately was clear, so that accurate ranges were taken.

¶ The Cholera Banks lie 10 to 12 miles south-east by south ⅜ east from Ambrose Channel Light-ship. The bottom is partly rock-reef formation and partly broken and honey-combed rock, some of the lumps being very large. There are also areas of a very coarse gray sand, with other patches made of black mud, while gravel, large pebbles and shells are found everywhere.

¶ The rocky formation is sufficiently rough and irregular to foul anchors. Some of the rock bottom is elevated considerably above the surrounding sea bottom, which is from 72 to 84 feet deep, while the banks show depths of from 73 feet to only 60 feet. One rock in particular, known to fishing pilots as Saddle Rock, has such abrupt sides that sinkers rolling off the rock will drop into from 10 to 20 feet more depth. This locality is quite a noted place for large silver or sea eels.

¶ The greatest extent of the banks is westerly and easterly. They are several miles long in this direction, while the width averages only about a mile.

¶ These are the famous, historical fishing grounds of the harbor. They were famous in early New York. Fishing veterans will remember the posters that advertised trips in the old days, with wood-cuts of men carrying thick poles over

their shoulders to support the strings of huge sea bass that dangled between them. Those were the days when the old police steamer "Patrol" found it useful to meet the craft on their arrival from the banks, in order to gather in the wounded and their assailants without undue loss of time. A trip to the fishing banks in those times was an adventure in more ways than the mere sea-going.

¶ The trips have become trips "de luxe" now, and the police do not concern themselves with the fishermen, for law, order, discipline, good fellow-ship and good humor rule, and the rowdy and "plug-ugly" of primitive New York has disappeared from the sea. But the hump-backed sea bass still are there and appear to have changed their habits very little. The Fourth of July often marks the opening of the season with good catches. The fishing gets more satisfactory and certain a little later, however. Once the fish appear and begin to bite, they usually stay and assure good catches through the rest of the season, which, in average years, will last till mid-September. In exceptional years they will bite far into autumn. When they do, these late bass are huge, as a rule, pugnacious and very fat.

¶ The bait most generally used for them is the large, saucer-shaped clam known as the skimmer. This is a clam that never occurs inside of bays or inlets, but lives exclusively outside of sea-beaches. It does not dig itself into the ocean bottom like the edible hard clam, and therefore, is thrown ashore by heavy storms that stir up the ocean sufficiently to reach them. Skimmers are not considered fit for anything except bait, though cynics declare that many a clam chowder contains them. Although their meat is firm and clean, they lack the flavor of the hard clam, and, in addition, nearly every skimmer shell contains a parasite in the form of a long, transparent worm.

¶ Skimmers are such easy bait to get, and the bass take them so well, that there is not much object in seeking other baits. However, there are many others that are equally attractive to the fish, or even more so. The mussel is a choice bait for them, and they take it eagerly; but it is too soft to stay well on the hook and is always likely to wash off before a fish finds it. This is a rather important consideration when fishing in deep water, as the time required for reaching bottom and hauling up to examine the bait, makes a large hole in the fishing time.

¶ A very killing bait is made by cutting up oily fish, such as menhaden (mossbunkers) or herring into fairly large cubes, big enough to cover the hook well.

¶ The sea bass are not permitted to monopolize the Cholera Banks. Fluke, blackfish, porgies and bergalls flock there, though perhaps not in such numbers or with such a rush as do the sea bass. Early in the season, ling crowd in huge numbers over the grounds, so that the records of catches often appear incredible to men who have not had the experience. It is a simple fact that sometimes they are so plentiful that good sea bass fishing can not be had until the ling have been fished out.

¶ In the autumn after the other fish have left, the cod arrive, and remain through the winter and into spring till the warm weather sends them off to colder water. Long ago the Cholera Banks, with some other of the near-by fishing grounds around New York, earned the reputation of being among the best along-shore cod grounds of the entire Atlantic coast, and they maintain this reputation still.

¶ The cod, like all the other fish that frequent these New York Grounds, take skimmer clam freely, and other baits rarely are required. For those who want to try different baits, there are the various sea crabs that do not "bed" in the mud in winter, as the blue crab does. These bait-crabs are the lady or calico crab, also known as the sand crab, and the crabs known as stone crabs, one variety of which is greenish and the other red in color. The calico crab is by far the best. The others are attractive only at certain times. The best condition for the calico crab is in the shedder state, but generally it is hard to get, while it is comparatively easy to obtain them in the hard state at the fishing stations. If hard crabs are used, the top shell must be removed, and the legs broken off, except the first joint, which is left on. The crab then is cut into pieces in such a way that at least one such leg-joint is left on each piece. The hook is passed through the body, out through the bony ring of the leg joint and far enough into the meat of the leg to hide the point of the hook.

LONG ISLAND
JERSEY CITY
N.Y.C.
ISLIP
Patchog.
GREAT SOUTH BAY
E. ROCKAWAY
FREEPORT
WADSW'TH
Ft. HAMILTON
WOODMERE
FIRE ISLAND
STATEN Is.
CONEY I.
ROCKAWAY
LONG BEACH
FIRE Is INLET
FIRE IS.
LIGHTSHIP
AMBROSE Ch.
No 6
LONG BEACH GROUND
AMBROSE LIGHTSHIPS
SCOTLAND
SANDY HOOK
NAVESINK LIGHT
SHREWSBURY ROCKS
LONG BRANCH
ASBURY PARK
17 FATHOM BANKS
CHOLERA BANKS
ANGLER BANKS
MIDDLE GROUND
FARMS

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KLONDIKE BANK
BARNEGAT INLET
BARNEGAT LIGHT
LIGHT
NEW
Barnegat Bay

TO BARNEGAT.

MIDDLE GROUNDS. This is only one of many fishing spots known by that name. It lies 1⅛ miles west-south-west from the Cholera Banks. As a matter of fact, the Cholera Banks, the Middle Ground and the Angler Banks really are one great submarine rock formation, and the sandy belts that divide them are probably due only to the fact that a continual process of sanding-up and uncovering is going on in this part of the sea. The general conditions, depths, methods of fishing and kinds of fish on the Middle Grounds are about the same as on the Cholera Banks, but it has the advantage of not offering so many good haunts for bergalls. Therefore, at times when these fish are numerous on the Cholera Banks, but not large enough to be worth catching, pilots often escape the nuisance by anchoring on the Middle Ground, whose rock bottom is less broken up and therefore does not attract the bergalls so much. The Middle Ground lies almost exactly mid-way between the Cholera Banks and the

ANGLER BANKS. The celebrity of the grounds under this name is comparatively modern, if compared to the Cholera Banks. The name first began to be well-known in the eighties. These banks lie 2¼ miles west-south-west from the Cholera Banks, in 60 to 72 feet of water with rocky bottom interspersed with dark and yellow sands, black gravel and broken shells. The ridges and broken masses of rock are, perhaps, not so pronounced as on the Cholera Banks, but they are sufficient to foul many anchors and to cost many sinkers and hooks.

¶ As on the Cholera Banks, there is much coral and sponge growth and there are also the cinder-like clumps that are the habitations of sea-worm colonies. They are famous for very large humped-back sea-bass, and the grounds appear to remain steadily reliable year after year. Cod and other fish also are plentiful in most years. In 1914 sea-porgies remained on these banks, and also on the Middle Grounds and Cholera Banks for a month and a half and trips were made specially for them. They ranged from ½ to 1 pound, and never were known before to remain so long, although they are found on the grounds every year for a time.

¶ These three places are so far off shore that it requires excellent pilotage to drop on them. Land ranges can be utilized only in good, clear weather. Even in the early times the pi-

lots found many hazy days when they had to steer entirely by compass bearings and feel for the bottom by soundings. In recent years the smokiness of New York and surrounding cities has greatly increased the difficulty of getting land ranges, and the Cholera or Angler Bank pilot has no easy job on his hands. This is increased by the covering-up of parts of the great reef by the sand and silt that come out of New York Harbor. Some geologists claim that were it not for this sanding-up, the rocks that form these banks could be traced all the way to the New Jersey coast as a great crescent-shaped reef.
¶ What may be an outlying part of this ancient reef was found in 1914 when it was named the

NEW MIDDLE GROUND. Sea bass, very large sea-porgies and fluke were struck in good numbers by the discoverers of these new banks, which lie in the direct course between the Angler Banks and Long Beach red Whistling Buoy No. 4. The bottom consists of gravel and large stones, and has a characteristic feature in the form of extremely large horse mussels, averaging three inches long.

THE FARMS. Using Scotland Light-ship as the point of departure, the compass course to these grounds is south by east ½ east, and the distance is 12 miles. They are deep water grounds, ranging from 102 to 120 feet. They have a very rocky bottom with sand and mud in between, and many patches of a bluish clay. Large pebbles and broken shells enrich the grounds, which are covered with marine deposits, coral and serpula tubes, layers of zoophytes, deep-water mussels and other food supplies that attract particularly such browsing fish as blackfish and cod.
¶ In June and July ling come to the grounds in multitudes, and it is no uncommon thing to catch them as fast as the lines can be baited and lowered. The Farms are not so good for sea-bass fishing, as it is the experience of fishing pilots that really large and profitable catches of sea bass are not usually made in water much more than 85 feet deep. But there are enough other fish to earn the name "Farms" which was given to these grounds in joke by the Beebes, who dropped on them while they were smack-fishing for Fulton Market.
¶ At that time the fishing fleet resorted very much to a large rocky area in that part of the sea, known by the somewhat

loose title of Rocky Ground. There was continual experimenting to pitch on particularly good spots, as the rocky patches were most irregular in extent and nature. There were, and are, very considerable areas here and there on this ground where the rocks have become quite sanded over, presenting a naked sea bottom where fish find no food. The depths, also, ranged very considerably in this locality, running down from 90 feet in a great slope to 96, 108, 114 and 120 feet within a few miles. The favorite fishing ground for the smacks was 114 to 120 feet, and this still represents the best depths for fishing in this general area. The Beebe's smack dropped away one day from the rest of the fleet and lowered lines quite a distance to seaward from the locality that was then the favorite. They had drifted about 4 miles east-south-east from the old "Rocky Grounds" when they began to strike fish "big and plenty." They went into Fulton Market with their live-wells choked with great cod. When they were asked where they had made the great "high hook" catch, they replied that they had found a fish farm. Afterward they stuck to this name, partly in fun and partly out of policy, as they wished to keep the secret of the new fishing spot to themselves. They succeeded in doing this for many years, although followed by rivals at every opportunity.

¶ Until recent years there were comparatively few fishing pilots who could locate this spot accurately, though they could, of course, find the more or less scattered rock-formations that occupy the rocky grounds. Captain Henry Beebe, however, says that the depths on the Farms proper range from 144 to 150 feet, which is considerably deeper than the depths that are generally fished in this particular region.

SEVENTEEN FATHOM BANK. In a sense this name, which was given to this bank by Al Foster in 1890, is a mis-nomer, as there is only a limited area that has soundings of 17 fathoms. Some pilots say that there is only one 17 fathom spot on the entire banks. The general depths are much greater, for the water ranges as deep as 150 feet. The characteristic feature of the bottom is the enormous amount of very large deep-sea mussels that are found throughout the bottom. These are not the edible mussels, familiar to those who frequent the fish markets. They are "horse" mussels and are unfit for human food. Indeed, they have been known to produce such violent sick-

SANDY HOOK.

ness that from time immemorial they have been regarded by fishermen as poisonous, like the smaller horse mussels that stick in the marshes around New York by the million. The mussels found on the Seventeen Fathom Banks are extremely large. Their meat is a bright golden color. Large clumps, matted together and adhering to stones or worm-tubes, are brought to the surface often while fishing. Like all mussel-beds, these matted clusters form attractive habitations for countless marine creatures large and small, from tiny snails to barnacles. This, with the deep water, makes the banks great favorites with blackfish, and they remain there and usually bite freely all winter. Some of the very heaviest blackfish that ever are taken in the vicinity of New York come from this ground. Strong hooks and lines are a great necessity.

¶ Another thing that the grounds are noted for is the size of the bergalls. They run so large here that they are fished for purposely. Indeed, they run larger here than blackfish in some in-shore waters, for they range from ½ to 3 pounds.

¶ Bergalls, better known as cunners, bite throughout the winter in mild seasons, and, like the blackfish, can be caught from January to May. The largest cunners are caught in the deepest water.

¶ The bearings for these grounds are 13½ miles south-east by south from the Rockaway Gas Buoy.

BLACK WARRIOR WRECK is one of the most familiar wrecks around New York, having been noted for its fine blackfishing through more than a generation. In early days it was celebrated for sheepshead.

¶ At one time it was partly visible above water. Owing to the extraordinary shifting of sands along Rockaway Beach, it has had many vicissitudes, sometimes sanding up enough to make it unattractive to fish. Of recent years it appears to have been fairly stationary.

¶ It lies in about 12 or 14 feet of water (low tide) in toward Rockaway Beach from the Black Warrior Spar Buoy. This buoy is easily found. It is anchored in about 30 feet. Rockaway Beach Life Saving Station bears north-east by east 2¼ miles from it. Rockaway Point bears north-west by north 1½ miles.

¶ The Black Warrior figures in American history, because it nearly caused war between Spain and the United States in 1854. The ship was a side-wheel steamship owned by the New York

and Alabama Steamship Co., and plying between Mobile and New York City via Havana. On February 28, 1854, the Spanish custom officials of Havana seized the vessel owing to a technical error in her manifest, which stated that she had no cargo, though cotton was in her hold. The cargo was removed and the captain fined heavily.

¶ The slavery question then was causing hot dissension in the country, and the pro-slavery people seized on the episode and demanded war with Spain, in the hope that the country would then annex Cuba and thus add another slave territory. Fortunately Spain surrendered her position and paid damages.

¶ The Black Warrior continued her voyages till 1859. In February 20 of that year, while trying to make New York Harbor entrance in a heavy snow squall, the captain over-ran his mark and struck at the edge of Rockaway Inlet.

¶ Rockaway Inlet then was much farther eastward. It is a peculiarity of Rockaway Inlet that it is continually shifting toward the west, and thus the Point naturally, moves westward with it. When the Black Warrior struck in 1859, the Inlet was eastward of the wreck, whereas now it is west. A few old pilots still remember that they used to leave the wreck on their port or left hand when entering the Inlet.

¶ What are now known as the Eastern Breakers, near the Black Warrior, then were the Western Breakers. It is believed that Rockaway Point has moved westward at least seven miles in the past fifty years. Hydrographic experts still can recognize the marks of the old inlet at Rockaway Beach inshore from the wreck.

¶ When this old inlet was in existence, the grounds around the Black Warrior were famous for codfish.

ITALIAN WRECK is off Rockaway Beach and was one of the most dramatic and terrible shipwrecks that ever occured off that place. It is that of the Italian bark Ajace, of Genoa, 566 tons, bound from Antwerp to New York with a load of old iron and empty kerosene barrels, under Captain Frederic Morice and a crew of 13 men.

¶ She reached the American coast on March 4, 1881, just as a tremendous north-east gale swept along shore. It did vast damage, tearing away part of the Long Branch pier and capsizing large vessels in Raritan Bay and carrying them up high on the meadows. At Coney Island it was especially severe, tearing away many piers, one side of the Hussey Hotel and most of the Tilyou bath-houses, and wrecking the Marine Railway.

¶ In the height of the gale, at 9 a. m., the crew of the west-end Rockaway Beach Life Saving Station caught sight through the flying scud, rain and mist, of a bark standing directly for the beach under closed-reefed topsails. Suddenly she hauled around to southward and westward, and went pitching and tossing along the outer edge of the Rockaway Shoals.

¶ She struck on the point of the shoals, and her topmasts fell. The life-savers hauled their boat across into Jamaica Bay and tried to get out through the Inlet, as it was impossible to launch through the enormous surf. The fog and scud had closed in again when they reached the Inlet. The sea was so tremendous that they could not force their way through, and they could see nothing more of the bark, though they watched till late afternoon.

¶ Some hours later the Coney Island Station crew went out to take a man and a woman from a wrecked boat-house in Jamaica Bay. Returning from the rescue, they saw a cabin-top adrift in the sea with a man on it. Although it was only about 1½ miles off shore, it took them 1½ hours to reach it. The man was the only survivor of the Ajace's crew.

¶ He told a thrilling story. When the bark struck, he said, the crew knelt down before the steward, who held up a picture of Madonna. While they were praying to it for rescue, the ship's carpenter suddenly hacked his throat, and stood there, raving and praying as he bled. Seeing this, others began to rave, and presently two sailors and the steward also cut their throats.

¶ The ship fell over on her beam, and her masts crashed away as the seas swept her again and again. The one survivor, Petro Sala, snatched at a cabin-top. While he was drifting, he suddenly saw a great blotch of blood rise to the surface, and the next moment the carpenter floated up, and struggled to reach the piece of wreckage. Sala seized him and pulled him up twice, but the man was too weak to hold on, and presently sank. In the next moment another of the sailors who had cut his throat swam feebly toward him, and he, too, was pulled up, but bled to death while he was clinging there. Thirteen men were lost in this wreck.

¶ Owing to the changes that are constantly occuring at Rockaway, the wreck now lies apparently closer in than when she struck. This is due partly to shifting but mostly to the fact that Rockaway Point and Beach have made out since then. The wreck's position now is between the Black Warrior spar buoy and the beach, and north by west from the Black Warrior wreck.

GRANITE WRECK, also known as the Granite Scow Wreck, lies east of the Italian wreck and not far from the Black Warrior. This is the wreck of the schooner Cornelia Soule, of 306 tons, which got into distress off the shore while trying to make New York with a cargo of granite worth about $10,000. She anchored on the Rockaway Shoals about 2 miles west-south-west of the Rockaway Beach Life-Saving Station on April 26, 1902, but could not hold and finally sank about a mile off shore. The life-savers rescued her crew of six men.

SNOW WRECK is the wreck of the schooner Robert A. Snow, which sank on February 8, 1899, while bound through Rockaway Inlet from Barren Island with a cargo of fertilizer. She lies south-east of Rockaway Point, quite close in shore, and is excellent for blackfish.

EAST WRECK lies some distance east of the Black Warrior Wreck and almost on the outer edge of the shoals that there run more or less parallel with the nearest part of Rockaway Beach. Several wrecks have been recorded in this locality in the past twenty five years, and it appears not quite definite as to which of these it is that now is known as the East Wreck. Scow number 16, sank in this vicinity November 1892.

OTHER ROCKAWAY WRECKS. There have been dozens of wrecks from Rockaway Inlet to Far Rockaway, some of which still need to be located, while others have become sanded up, or otherwise have become useless for fishing. Many undoubtedly would prove to be excellent places if they can be found. Among them are: schooner James Lawrence, sank January 24, 1877, with a load of rosin about ¼ mile east of the eastern Rockaway Life-Saving Station—schooner Greenbury Willey, sank October 17, 1878, on the south side of Rockaway Inlet with a cargo of phosphate rock —schooner Mary Turner, lost 1 mile east of Rockaway Beach village, January 2, 1881—schooner Copia, sunk off Rockaway Point, September 8, 1882—schooner P. S. Lindsay, sunk April 10, 1887, west by south from Rockaway Point Life-Saving Station—tugboat Governor, sunk in 1898 between Rockaway Point and Swash Channel—schooner Evelyn, from New Haven to Jamaica Bay, lost April 30, 1900, west of Rockaway Point—Boyle wreck, now lying just south of a point midway between the Rockaway Gas Buoy and Buoy No. 2—and the Kenyon or Channel wreck, lying between Buoy No. 2 and the Snow wreck.

IBERIA WRECK is the most popular, and probably the best, of all the fishing wrecks around New York. It lies about 3¼ miles south of Long Beach. It is a reasonably easy wreck to find, even without bearings from the shore, as it lies close to East Rockaway Whistling Buoy, better known to fishermen as Buoy No. 6. The fishing pilots have exact ranges, of course, and can drop on it instantly. In the absence of local knowledge, or in thick weather, it can be readily found by dragging a weight northward from Buoy No. 6.

¶ The Iberia was sunk by collision November 10, 1888. She was bound in from the Persian Gulf and was running along the Long Island coast to make the entrance to the Harbor, when the Cunard steamship Umbria, bound out, met her. They collided and the Iberia was so badly damaged that she sank quickly. The Umbria escaped with only slight damage. All on board the Iberia were saved.

DRUMELZIER WRECK very generally known as the Fire Island Wreck, is the wreck of the British steamship Drumelzier which came ashore in a northeast gale and in a blinding snow-storm December 26, 1904, striking Fire Island Bar about 2½ miles from Oak Island Life-Saving Station, 4 miles from the Fire Island Station and about 2½ miles from shore. Her crew of 30 men declined the aid of the surfmen, and remained aboard.

¶ The wrecking vessel Merritt undertook to haul her off, but on December 28 another violent gale began, raising such seas that it was impossible for the Long Island crews to get their boats through the surf.

¶ The Drumelzier's crew and the wreckers who were aboard, were soon in imminent danger. The Treasury Department, notified of conditions, ordered the Sandy Hook Life-Saving crew to attempt to reach the wreck. Keeper Patterson immediately hired the tug Catherine Moran and started out at 2.45 a. m., December 29, with his big life-boat in tow.

¶ They made the trip of 42 miles successfully, but for a long time could not use their life-boat, as during the voyage it had become completely sheathed with heavy, grained sea-ice. Finally, however, they succeeded in chopping it clear, and then, having been towed well to windward by the tug, they made a desperate run for the wreck and managed to come close enough to take the crew off.

¶ Fifteen wreckers pluckily refused to leave the vessel, as they were determined to win the salvage if they could, the Drumelzier having a very valuable cargo. The Moran thereupon went back to Sandy Hook with the life-boat.

¶ At 1 p. m. the seas grew so that it was plain that the ship was fated. The Oak Island, Fire Island and Point of Woods crews assembled and prepared to launch boats, but the Merritt managed to get her boat over and the wreckers were hauled in through the surf.

¶ The Drumelzier broke up, and has worked well in shore of where she struck. She now lies on the south edge of the south bar, south of Fire Island Inlet about ⅔ of the way from the point of beach to the inlet, with 4 to 6 feet over her at low tide, and some parts awash.

¶ Blackfish are plentiful there, but the wreck is sanding up. One captain in 1914 reported the capture of a fluke weighing 16 pounds 3 ounces here.

PETER RICKMERS WRECK also known as the Oil Wreck, is that of a German full-rigged sailing ship which stranded 1½ miles south-east of Short Beach Station on April 30, 1908, in thick weather and a heavy easterly gale. The Zach's Inlet and Point Lookout crews were unable to board her, and failed again on May 1, but succeeded the next day.

¶ The crew refused to leave, the gale having gone down. Wreckers went aboard later, and took charge. They tried to get her off until May 7, when a renewed gale set in. Very soon the seas ran so hard that the wreckers set distress signals.

¶ The life savers assembled from Jones Beach, Zach's Inlet, Short Beach and Point Lookout, and tried to heave a boat through the surf, but could not. They then fired five shots with the life-line gun, but the Rickmers was to far off shore.

¶ Finally word was sent to New York, and the government ordered the Revenue Cutter Mohawk to start from Sandy Hook with the big power life-boat of that station in tow. The Mohawk arrived after a stiff battle, and found that she was just a few minutes too late. The Long Island crews had launched a boat with picked men and had succeeded in taking off the ship's 33 sailors in three trips.

¶ The 40 wreckers, mostly trained surf-men, seized on a lull in the surf and managed to launch their own surf-boats from the deck of the wreck. They all landed safely.

¶ Later the wreckers continued to salve the cargo of the Rickmers, which consisted of case oil, and this effort led to a bitter contest between them and the people of the coast. The case oil began to float away, owing to the breaking-up of the wreck, and the Long Island folk were gathering rich cargoes of five-gallon cases, whereupon the wreckers, acting, it was said, under orders, began to punch holes into all drifting cargo that they could not pick up.

¶ The quarrel grew to such a pitch that the United States Government was appealed to on the ground that the liberated oil was destructive of fish life. The 'long-shore people managed, in the end, to gather up enough oil to keep them in fuel and light for some years, it is said.

¶ The Rickmers wreck has worked in shore and now lies less than ½ mile from Short Beach, partly awash at low tide and with 4 to 10 feet over her submerged parts. Blackfishing is very good at times.

TEA WRECK is that of the British steamship Acara, which stranded with a cargo of tea on Jones Inlet Bar in a heavy south-south-west-gale, March 1, 1902. Both the Zach's Inlet and Short Beach Life-Saving crews went to her. The seas were so high that three of the Zach's men had to shift to the Short Beach boat on the way. The Acara launched two boats. One, containing 44 men, actually managed to land. The other with 17 men, was capsized in the breakers, but the life-savers succeeded by a powerful effort in saving them all. Later they saved a part of the ship's tea-cargo.

¶ She lies about 600 yards off shore on the east side of Jones Inlet across a sand-bar and has been sanding up in recent times. Pilots predict that she will shift outward again and will furnish good fishing. She lies in the break of the surf now and is partly awash at low water.

HOWARD WRECK also known as Scow Wreck, lies about ¼ mile out from the Rickmers wreck, and south-east from it. It offers good anchorage at practically all times, and has 20 feet of water over it at low tide. It appears to be the remnants of an old barge, and usually affords excellent fishing for blackfish and fluke.

SCOW WRECK No. 2 is about 75 feet inshore from the Rickmers or Oil Wreck, and may be a part of it. It is awash at low water, but despite the small depth it has become so well encrusted with crustaceans and other shellfish that it attracts big blackfish.

RHODA WRECK is in the "break" about 100 yards off shore from Jones Beach, and lies about midway between Jones Inlet and Fire Island Inlets. Parts of it are awash at low tide, and the rest has from 4 to 10 feet of water over it. At times there has been quite satisfactory blackfishing here. This wreck is that of the steamship Rhoda, which ran ashore in a fog in 1905, when bound to New York with a copper cargo. She remained intact for some time, and many men got part of her cargo out. Captain G. W. Wilson took the first load of ore from the wreck. The ship was broken up finally in a storm in 1906.

ELIZABETH WRECK. Up to the time when the United States Life-Saving Service was organized, Fire Island and the shore east and west of it, were "synonyms of horror" to sailors. The loss of life on these beaches was enormous. Many of the wrecks have gone down in history because of their tragedy.

¶ One of the famous ones was the wreck of the sailing ship Elizabeth, a new vessel sailing from Leghorn, May 17, 1850. Among her passengers was Margaret Fuller Ossoli, celebrated under her maiden name of Margaret Fuller, as an American writer and a member of the noted Brook Farm Colony. She had married the Marquis Ossoli, an Italian patriot, and had passed with him through the Italian war of liberation.

¶ She had a morbid dread of the voyage, and declared that she had been warned it would be fateful. Disaster began soon after sailing. The captain died from small-pox and his body was dropped overboard in Gibraltar Harbor. The plague overtook several other members of the ship's company after they got into the Atlantic.

¶ Disease-stricken and beset by terrible storms, the ship struggled for two months before she came within soundings. At noon, July 18, in a thick fog, with the wind south-east, the first officer who commanded the vessel, set her course east-north-east, believing that he was close to the New Jersey coast. Although a

gale set in by night, increasing to a hurricane, he kept this course, confident that he was standing along the New Jersey beach. Unhappily, he was further north than he had believed, and thus the course was fatal, as it led him straight on the Long Island beach.

¶ The ship struck Fire Island Beach at 4 a. m., July 19, 1850. Some of the crew escaped, but most were lost with most of the passengers. Margaret Fuller, her husband and their boy-baby were drowned, the latter in the arms of the ship's steward.

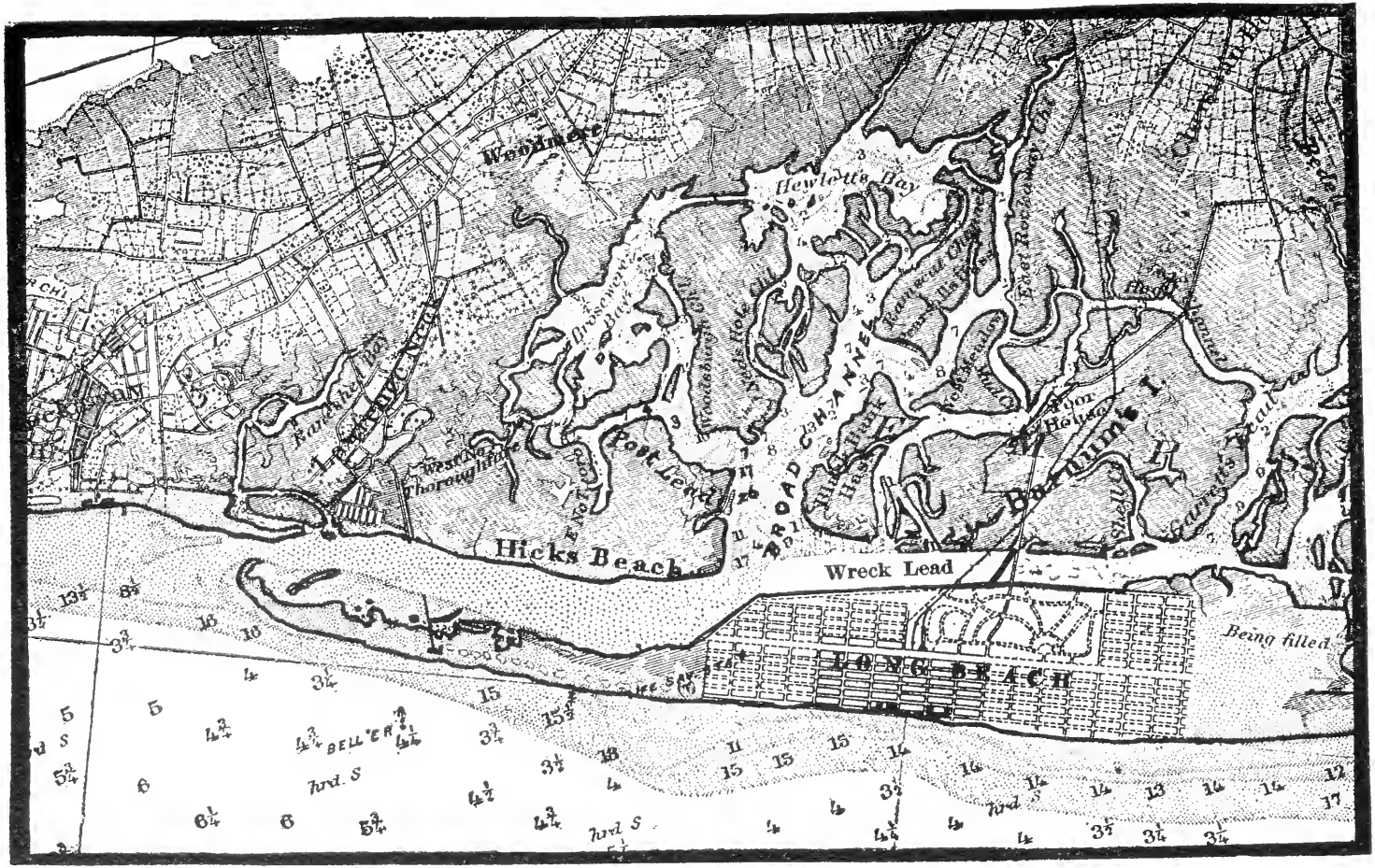
THE CIRCASSIAN does not strictly belong in this list because she was wrecked farther east at Bridgehampton, but is mentioned here because she is the most celebrated Long Island wreck in the U. S. Life-Saving Service records for the reason that the men on her were lost because they would not let the life-savers take precautions to save them. The steamship went ashore in a December night of gale and snow, 1876. The life-savers took off her passengers and crew, including 12 people whom the Circassian had rescued from a wreck at sea. The Coast Wrecking Company later put aboard 10 Shinnecock Indians to save her. They were joined by 16 of her original crew and 6 other professional wreckers.

¶ The weather became bad, and the life savers warned the wreckers to come ashore. When they refused, the life-savers took a line out, in order that it might be used to carry the breeches buoy, as they feared that it would be impossible to launch a boat when the threatened storm broke. The chief of the wreckers refused absolutely to permit the line to be made fast and ordered the life savers away.

¶ The gale began soon afterward, and overwhelmed the Circassian. The most desperate efforts of the life-savers, aided by volunteers, were in vain. They suceeded in wresting only 4 men out of the sea alive. Twenty eight were drowned.

VICKSBURGH a coastwise steamship bound to New York from Port Royal, S. C., missed her course in a fog February 25, 1875, and became a total loss on Fire Island beach, but no lives were lost on that occasion.

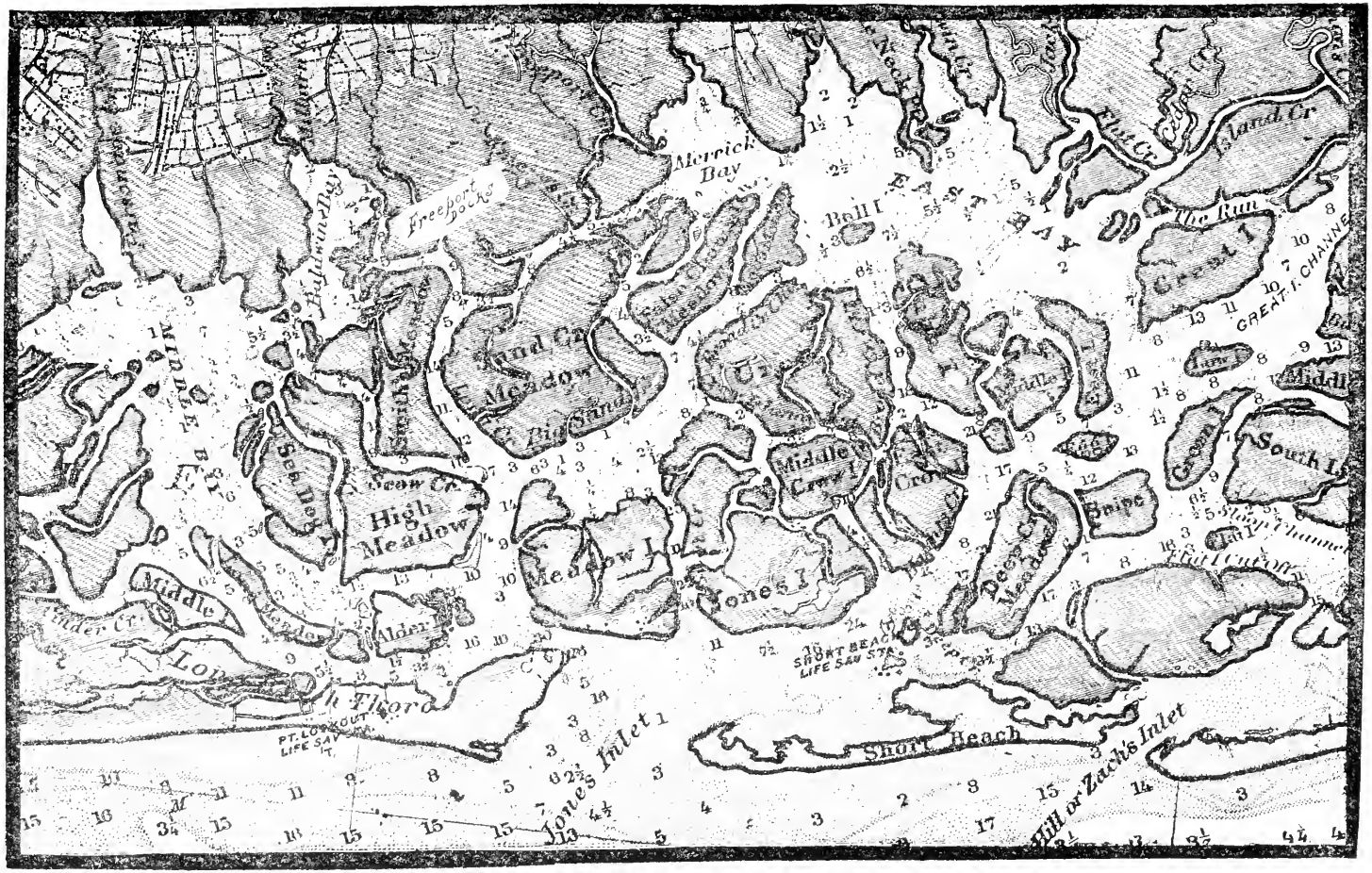
HELEN G. HOLWAY a schooner of 223 tons, bound from Cienfuegos, Cuba, to Boston with sugar and molasses, struck 12 miles east of Fire Island Light, April 4, 1876, and became a total loss, with six of her crew.



LONG BEACH (HEMPSTEAD BAY).

OTHER WRECKS Schooner Edgar Baxter, bricks, western edge of Fire Island Bar, November 18, 1875—schooner Ida B. Silsby, western part of Fire Island Bar, March 22, 1876—schooner Kate Grant, east of Long Beach, December 12, 1876—schooner General Connor, east end Long Beach, December 6, 1877—schooner Gazelle, outer point Jones Inlet Bar, November 5, 1878—pilot schooner Aspinwall, 1 mile west of Fire Island, April 20, 1880—sloop Equator, Fire Island Bar, November 8, 1880—schooner H. J. M., east end Jones Beach, January 11, 1882, loss $17,000—schooner Julia, Hog Island Shoal, Long Beach, January 1, 1884—schooner Alexander Harding, Hog Island Inlet Shoal, November 14, 1884—barkentine Lotus, 1¾ miles east Long Beach Station, January 3, 1887—schooner Eva C. Yates, Fire Island Bar, September 26, 1887—schooner Sabao, Jones Inlet Bar about 2 miles west of Short Beach Station, October 12, 1889—brig Joseph Banigan, ¼ mile north of Long Beach Station, 1 life lost, March 24, 1891—brig Eugenie, Jones Inlet Bar, off Short Beach Station, October 28, 1890—schooner Glenola, Jones Inlet (Short Beach Station) February 6, 1892—schooner C. Henry Kirk, ½ mile south-west of Long Beach, August 29, 1893—schooner Richard B. Chute, Jones Inlet Bar (Short Beach Station), November 16, 1893—barge Seth Low, 1639 tons coal, ¾ miles south-west Zach's Inlet Station, 2 lives lost, January 14, 1895—bark H. J. Libby, 1 mile south-west Zach's Inlet, March 2, 1896—schooner May McFarland, 1 mile west Long Beach Station, February 27, 1899—schooner A. R. Keene, Cuba to New York, 2½ miles west Point Lookout Station, May 10, 1901, $30,000 loss—sloop Bay Queen, 3 miles west Long Beach Station, May 28, 1901.

NEW JERSEY WRECKS. Schooner Hennessy, Long Branch, November 11, 1876—steamship Rusland, Monmouth Beach Station, March 17, 1877—brig Etta M. Tucker, Asbury Park, January 3, 1878—bark Italia, Deal Beach, January 16, 1879—sailing ship Hanna, Monmouth Beach Station, February 18, 1879—schooner Artie Garwood, Monmouth Beach Station, December 14, 1879—schooner Stephen Harding, 1 mile north Spermaceti Cove, February 3, 1880—schooner Emma C. Babcock, 1¼ miles north Monmouth Beach, February 3, 1880—bark Melchior, 1½ miles south Seabright, April 30, 1880—bark W. A. Holcomb, ½ mile east of Long Branch, October 24, 1880—sailing ship Pliny, 2½ miles south of Long Branch, March 13, 1881, $443,000 loss.



GREAT SOUTH BAY (FREEPORT SECTION).

MAGGIE M. WEAVER was a schooner of Mauricetown, N. J., bound from Philadelphia for Saugus, Maine, with a heavy cargo of coal. On March 20, 1875, she was about 1½ miles south from Sandy Hook when a heavy storm struck her and overwhelmed her so quickly that no help could reach her in time from the land. She went down with her crew of six men, who were all lost.

DAVID H. TOLCK went into the surf on the bars off Long Beach, N. J., near the Harvey Cedars Life-Saving Station on February 26, 1879. The vessel was a 445 ton schooner bound for New York with a cargo of sugar from Sagua La Grande, Cuba. She struck hard, in a very heavy sea and wind, and began to break up almost at once. The life-savers worked heroically, and lost no time, but before they could reach her with the shot-line to stretch a breeches-buoy hawser, the seas had carried away five of her crew.

W. J. STAIRS This was a bark of 1,062 tons, which sailed from Liverpool with salt for New York. On March 1, 1882, she struck on the outer bar off Long Branch, N. J., 1 mile north of the Long Branch Life-Saving Station. The sea and wind were so terrific that she fetched over, and struck again within 350 yards of the sand bluffs.

¶ Despite this closeness to land, the conditions were such as to defeat again and again the efforts of the life-savers and of the many fishermen and other volunteers who tried to rescue the unhappy crew. It was out of the question to launch a boat. The life-line was fired again and again, but even at that short range the wind blew the shot out of its course. Therefore it was some time before the breeches buoy could be brought into operation.

¶ Then the heroic life-savers who had risked their lives recklessly for hours, were able at last to bring 13 sailors ashore. Twelve, however, were drowned.

OFF-SHORE WRECKS There are records of the following wrecks in the sea within reaching distance of the New Jersey coast: schooner Washington sunk with stone ballast 3 miles east-south-east from Sandy Hook, July 31, 1884—sunken wreck 6 miles south ½ east from Scotland Lightship. Spars blown up and destroyed by U. S. tug Nina January 7, 1890—steamship Vizcaya and schooner Cornelius Hargraves, sunk by colliding with each other, off

GREAT SOUTH BAY (SOUTH OYSTER BAY SECTION).

Barnegat, masts destroyed by U. S. ship Yantic January 31, 1891, hulls in 12 fathoms—sunken wreck on Five Fathom Bank off Cape May, masts torpedoed by Yantic February 23, 1891, leaving clear depth of 10 fathoms—square-rigged vessel 8 miles east of old mooring of Sandy Hook Lightship, anchored spars blown up by U. S. ship Fern July 4, 1893—sunken wreck 14 miles east-north-east ½ east from Barnegat, spars blown up by U. S. ship Vesuvius October 14, 1893—sunken wreck 2⅛ miles north-east from Ambrose Channel Light-ship, found by Vesuvius October 16, 1893 (exact location latitude 39 degrees, 12 minutes, 30 seconds; longitude 73 degrees, 49 minutes, 30 seconds).

SCOTLAND LIGHT-SHIP is anchored due east about 2½ miles from the nearest part of Sandy Hook. Ships approaching New York from a southerly direction get this light-ship in line with Romer Shoals Light-House, which puts them on a straight course into and through the South Channel. After passing Romer Shoals Light, the ship swings slightly so as to get herself in a straight line between the Scotland Light-ship astern, and the Elm Tree Beacon (Newdorp Beach, Staten Island) and the high Newdorp Beacon (on hills beyond beach) ahead. This makes the Swash Channel.

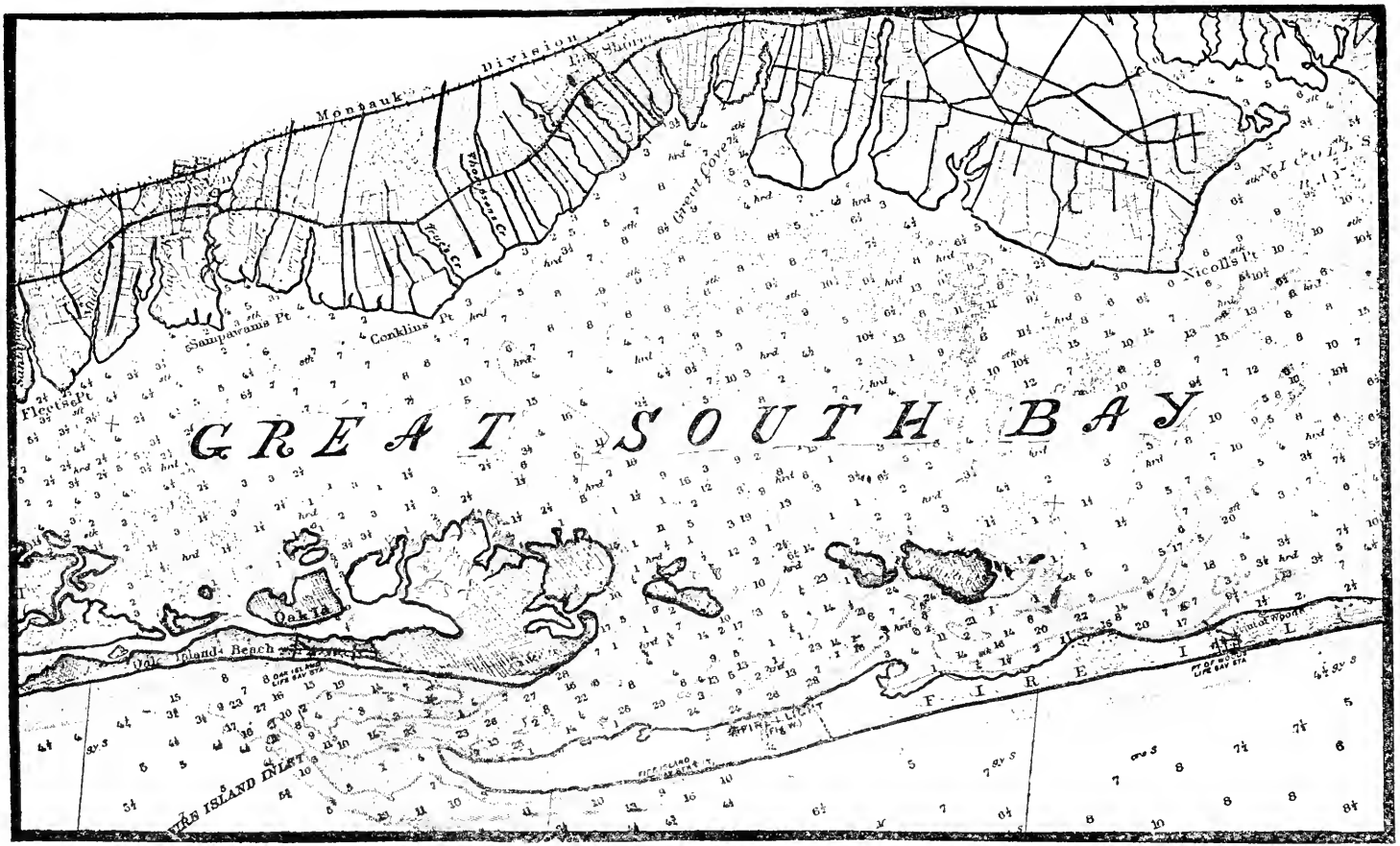
¶ The light-ship is anchored in 63 feet. It has a lead colored hull, with "Scotland" on each side in great characters. In the day-time its two masts carry black cylindrical disks known as "day-marks." At night the foremast shows a brilliant white light that flashes twice every 18 seconds, as follows: 1st flash, lasting 3 seconds; darkness (eclipse), 3 seconds; 2nd flash, 3 seconds; eclipse 9 seconds.

¶ This flash is 350 candle-power and can be seen 11 miles in clear weather.

¶ On the mainmast (after-mast) is a steady (fixed) red light, 300 candle-power, visible 11 miles in very clear weather only. In fog the ship sounds a triple bell-stroke every 45 seconds.

¶ The Scotland is one of the oldest light-ship establishments on the coast. The first light-ship was put on this range in 1868. The present vessel was put on in 1902.

¶ Originally it marked the wreck of the steamship Scotland. The Scotland, in-bound, was struck by a sailing vessel off Fire Island and badly damaged. Her captain made a run for Sandy Hook, hoping to beach the ship inside of Sandy Hook Bay, but



GREAT SOUTH BAY (FIRE ISLAND SECTION).

she sank when she reached the Outer Middle Ground which is part of the great shoal off the Hook.

¶ The population of New Jersey made a great salvage of it, for she was loaded with cheese and bees-wax, most of which floated. Small boats, fishing smacks and steamers gathered in all they could find. Captain Scott of New London then made a more complete salvage of her by blowing her side out with explosives. He landed the cargo on the old Sandy Hook dock.

¶ The wreck was a decided danger to navigation, especially to ships bound south, and the Government established the Light-ship finally. Some years afterward when the danger from the Scotland wreck had disappeared, the light-ship was removed; but navigators and pilots had become so accustomed to it that they agitated successfully for its replacement.

¶ It does not at the present time mark the site of the old Scotland wreck, but is anchored much farther out at sea, in order to serve as an entrance light for New York Harbor.

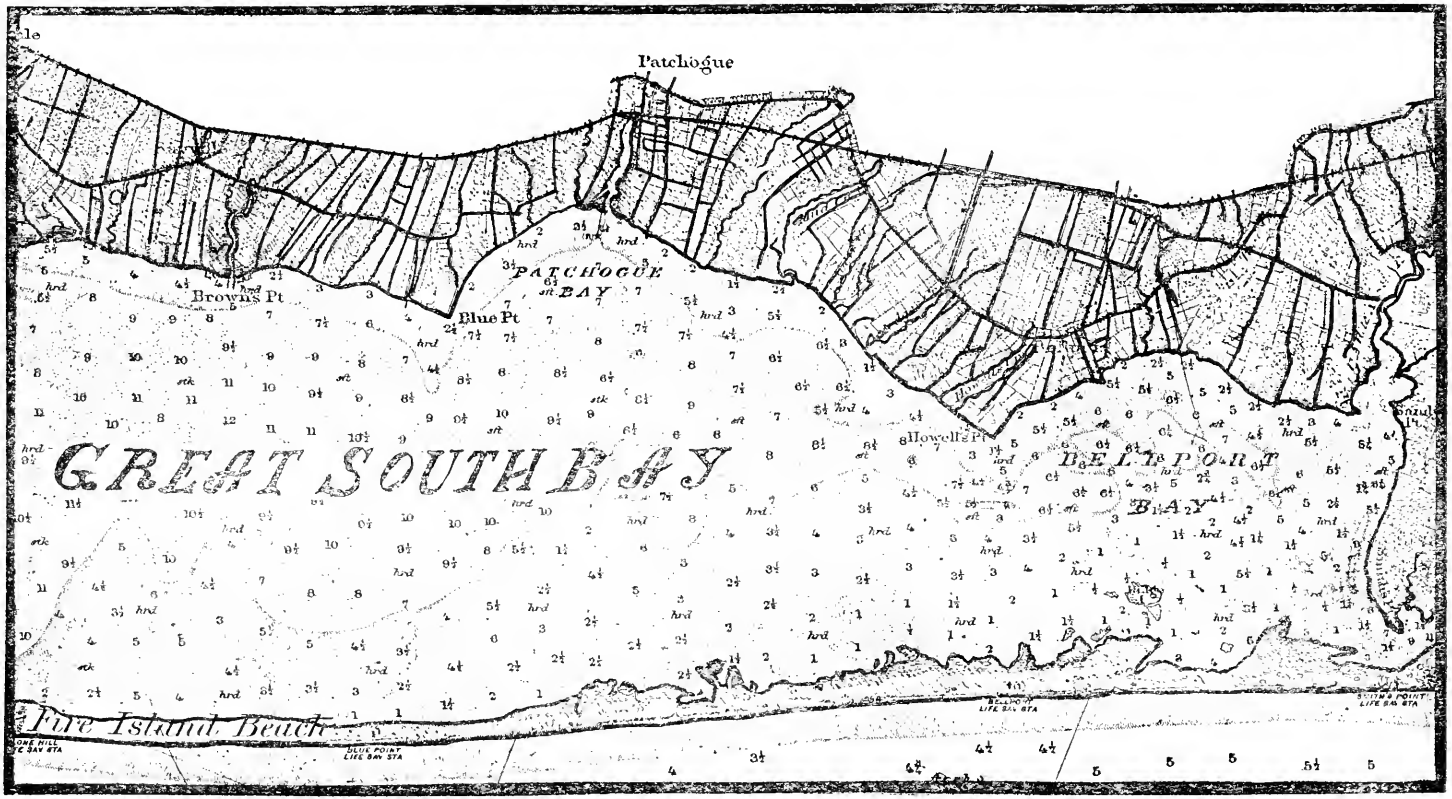
AMBROSE CHANNEL LIGHT-SHIP was established in 1908 to replace the famous old Sandy Hook Light-Ship which marked the sea-ward axis of the old channels. The present vessel marks the entrance to the great Ambrose Channel. It shows one of the most powerful lights carried by any vessel of its kind in the world.

¶ On a 52 feet high foremast it exhibits a 60,000 candle-power white light of the "occulting" character. It shows light 12 seconds, darkness 3 seconds. It is visible 13 miles. For fog it has a 12-inch steam whistle that blows 3 seconds followed by 12 seconds of silence. It also has a submarine bell which strikes "22" every 12 seconds in fog.

¶ The light-ship has a straw-colored hull with "Ambrose" on each side. On its two masts it shows black hoop-iron cage-work circles as day-marks. It lies in 78 feet.

GREAT SOUTH BAY is one of the most famous sporting bays on the North Atlantic Coast of the United States. It is nearly 30 miles long, and very irregular in shape, being 3½ miles wide between the beach and the mainland of Long Island in some places, and only ½ mile in others.

¶ The greater part of it is shallow, with channels cutting through, making splendid feeding grounds for flounders, weakfish, fluke and lafayettes. It contains some good kingfish grounds, and the bluefishing near the inlets is excellent.



GREAT SOUTH BAY (EASTERN END).

¶ At ordinary low water there is only an average of from 1 to 5 feet of water on the flats. The channels have from 8 to 12 feet, with many deep holes which are especially good for fishing. ¶ There are a number of marsh islands and meadows, especially in the Long Beach and South Oyster Bay sections, where the islands are so thickly grouped that there is practically no open bay, but only a maze of winding channels. These offer fine fishing as a rule.

¶ From the days of the Dutch occupation of New York, Great South Bay has been celebrated for its duck and shore-bird shooting. From the marshy grounds about Freeport all the way to Good Ground the bay offers tempting places for food and rest of which the birds avail themselves in great flocks. Very often in favorable seasons there are arrivals of wild geese and brant.

¶ A number of inlets open to the sea from the bay. Owing to the currents and heavy surf, many of these change their character every few years. Some close up entirely for long periods, and others widen and deepen. At present the two important inlets are Jones Inlet and Fire Island Inlet. Both these inlets demand excellent local knowledge and expert management of boats for successful navigation.

¶ Fire Island Inlet is the only harbor of refuge for small coasting vessels on the southern shore of Long Island, but every year some of them are lost in trying to make its shelter because they attempt to run it after the sea has become too high. The bars on both sides of the inlet have been said to be "lined with wrecks," and this probably is not far from the truth.

¶ In addition, the position of Fire Island relative to the harbor of New York is such that large ships steering for the port are always in danger of running past the entrance to the New York Channels in a fog if their reckoning is not perfect, and continuing until suddenly they are on the Long Island Coast. Consequently the life saving crews of Long Beach, Short Beach, Zach's Inlet, Fire Island and Point of Woods have plenty of experience with large vessels. It speaks volumes for the excellence of their work that there have been few losses of life in many years past.

SOME USEFUL FISHING HINTS

Every kind of fish bites differently from every other kind. It is absolutely impossible to catch fish in numbers unless one knows their habits exactly. Thus, for instance, it is useless to fish away from the bottom for flounders. But it would be equally useless to fish on bottom for bluefish.

Sea bass and blackfish are bottom feeders, but they will never be found on sandy or muddy bottom that has no rocks or wrecks. They feed on the little creatures that live on incrusted places. Consequently, the only certain way to find sea bass and blackfish is to find wrecks, mussel beds, or rocks.

It is not enough to know where the different fish may be found. The angler must understand exactly what their feeding habits are. Thus, the hunting fish, such as bluefish, weakfish and fluke prefer to feed on things like spearing, minnows, shedder crabs and mossbunkers. The flounder, tomcod, porgy and lafayette, however, prefer worms and clams.

The tackle must be suited to the places that are to be fished. To be provided with the right tackle makes the difference between success and failure. The fisherman who takes care to find out the conditions before he starts for a place, is the man who will get the fish if they are to be had. If the fishing is done where there is a strong tide, the fisherman must have plenty of heavy sinkers. On the other hand, if the fishing is done in shallow water with little or no current, it may be necessary to have the very smallest sinkers, perhaps as fine as split shot, and it will be well to have a float along, too.

The tackle that is perfectly good for bay fishing would be utterly useless for deep sea fishing. On the deep offshore grounds it is absolutely necessary to have a strong, stiff rod, a powerful reel with a very stout line, and extremely heavy sinkers. This is not only because the fish are large, but because the conditions are such as to put an extreme strain on all the tackle.

The size of hooks is one of the most important matters. For deep sea fishing the hooks must be very much larger and stronger than they need to be for bay fishing. But care must be taken, in all kinds of fishing, to have hooks that are not too large. They must be strong and large enough to hold the fish securely after he is hooked, but they must not be so large that they cannot easily enter the fish's mouth.

A hook that is too large will not hook the fish. He will get off.

Every angler, even the most experienced, should have a hook chart so that he can see at a glance the different sizes and shapes of Sproat, Limerick, Kirby, Chestertown, Carlisle, Virginia, O'Shaughnessy, Limerick and Blackfish hooks. Such charts give the full size of hooks in the well known book "Fishing Around New York," which is for sale in Tackle Stores for 25 cents or is sent to any address upon receipt of price by Knowlson and Muller, Publishers, 309 Washington Street, Brooklyn, N. Y.

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